Commonwealth of Pennsylvania
Pennsylvania Historical and Museum Commission
Bureau for Historic Preservation
Commonwealth Keystone Building, 2nd Floor
400 North Street
Harrisburg, PA 17120-0093
www.phmc.state.pa.us

March 4, 2003

Phillis Johnson-Ball
Section of Environmental Analysis
1925 K Street, NW #500
Surface Transportation Board
Washington, DC 20423

TO EXPEDITE REVIEW USE
BHP REFERENCE NUMBER

RE: **ER # 2000-0841-063-J**
STB; Revised MOA Between the Surface Transportation Board, the Pennsylvania State Historic Preservation Officer, and Norfolk Southern Corporation and Norfolk Southern Railway Company for the Norfolk Southern Clarksburg to Saltsburg Connector, Concerning Archaeological Mitigation for the Olliver I (36IN157), Olliver III (36IN160), Olliver IV (36IN428), and the Reed/Cribb (36IN424) site, Armstrong Township, Indiana County, PA

Dear Ms. Johnson-Ball,

I am enclosing three copies of the signed MOA for the above referenced undertaking. Please have the appropriate signatures obtained for all copies and return one signed copy to the Bureau for Historic Preservation for our Environmental Review file.

Thank you for all your efforts in completing this document. We look forward to working with you towards the completion of this investigation.

Sincerely,

Jean Cutler

Jean Cutler, Director

cc: Laura Dean, Advisory Council on Historic Preservation, Washington, DC

MEMORANDUM OF AGREEMENT

AMONG

THE SURFACE TRANSPORTATION BOARD

THE PENNSYLVANIA STATE HISTORIC PRESERVATION OFFICER

AND

NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY

PURSUANT TO 36 CFR § 800.6(b)(1)
REGARDING THE NORFOLK SOUTHERN SALTSBURG CONNECTION, AND ARCHAEOLOGICAL SITES OLLIVER I (36IN157), OLLIVER III (36IN160), OLLIVER IV (36IN428), AND THE REED/CRIBB SITE (36IN424), IN INDIANA COUNTY, PENNSYLVANIA

WHEREAS, The Norfolk Southern Corporation and Norfolk Southern Railway Company (NORFOLK SOUTHERN) is seeking authority from the Surface Transportation Board (BOARD) for construction and operation of a 5.26 mile rail line between Saltsburg and Clarksburg (Saltsburg Connection), in Indiana County, Pennsylvania; and

WHEREAS, the Area of Potential Effect (APE) has been identified as generally following directly east of State Route 286, 5.26 miles along Blacklegs Creek and the Right of Way (ROW) ranges from 30 to 101 meters wide, and encompasses approximately 47 hectares (116 acres); and

WHEREAS, the BOARD, pursuant to 36 CFR § 800.4(c) has determined that the Olliver I site (36IN157), Olliver III site (36IN160), Olliver IV site (36IN428), and the Reed/Cribb site (36IN424), are eligible for inclusion in the National Register of Historic Places, and;

WHEREAS, surveys to identify and evaluate historic buildings were conducted in the APE of the project and the Pennsylvania State Historic Preservation Officer (PASHPO) concurred that no above-ground historic resources would be affected by this project, and;

WHEREAS, the BOARD has determined that the construction of the Saltsburg Connection will have an adverse effect on those portions of the Olliver I site (36IN157), Olliver III site (36IN160), Olliver IV site (36IN428), and the Reed/Cribb site (36IN424), located within the NORFOLK SOUTHERN ROW; and,

WHEREAS, the BOARD has consulted with the PASHPO in accordance with Section 106 of the National Historic Preservation Act (16 U.S.C. § 470) and it's implementing regulations (36 CFR § 800) to resolve adverse effects of the Saltsburg Connection on archeological properties; and,

WHEREAS, the BOARD has involved and will continue to involve the public and historic interest groups, and the Shawnee Tribe of Oklahoma; Cayuga Nation; Delaware Nation, Oklahoma; Eastern Shawnee Tribe of Oklahoma; Oneida Nation; Onondaga Indian Nation; Seneca Nation of Indians; St Regis Mohawk Tribe; Stockbridge-Munsee Community of Mohican Indians of Wisconsin; and Tuscarora Nation concerning the proposed project and its effect on historic properties; and,

WHEREAS, NORFOLK SOUTHERN has participated in consultation and has been invited to be a signatory to this Memorandum of Agreement (MOA) (36 CFR 800.6(c) (2)); and,

WHEREAS, the BOARD has notified the Advisory Council on Historic Preservation (Council) in compliance with 36 CFR § 800.6(a)(1) of its adverse effect determination, and the Council has chosen not to participate in the consultation process; and,

WHEREAS, the BOARD may use an independent third party contractor, working under its supervision, direction, and control, to assist in meeting the Board's responsibilities defined in the stipulations below; and,

NOW, THEREFORE, the BOARD shall ensure that the following terms and conditions will be implemented in compliance with the National Historic Preservation Act of 1966 (16 U.S.C. 470).

STIPULATIONS

The BOARD shall ensure that the following stipulations are carried out. The Board may fulfill these stipulations itself, may use an independent third party contractor or may direct NORFOLK SOUTHERN (and its Contractor) to assist in fulfilling these stipulations:

1. NORFOLK SOUTHERN (and its Contractors) shall ensure that the portions of the site areas (the Olliver I site (36IN157), Olliver III site (36IN160), Olliver IV site (36IN428) and the Reed/Cribb site (36IN424)) that are not to be investigated as part of the Phase III field investigation work specified in the research plan shall not be used as staging areas for construction equipment or other construction related machinery during the Phase III field investigation. Construction fencing or other visible barriers may be used, as appropriate, to isolate the site areas.

2. NORFOLK SOUTHERN shall direct its Contractors to consult with the PASHPO prior to excavating the eligible resources. (The signatories note that NORFOLK SOUTHERN has prepared, and the PASHPO has approved, a research plan that evaluated known research in the site area which is known as Sub basin 18, Lower Allegheny River, Watershed C. The research plan, as specified by the PASHPO, formulated research questions in light of known archaeological resource data for the site area.)

3. NORFOLK SOUTHERN shall prepare a final report regarding the eligible resources that

will be consistent with the *U.S. Secretary of Interior's Standards and Guidelines for Documentation* and the PASHPO's *Guidelines for Archaeological Investigations* (1991).

4. The PASHPO shall have at least 30 days, if necessary, to comment on the proposed draft of the final report which NORFORK SOUTHERN shall submit to the PASHPO on or before October 31, 2003. The BOARD shall consider all comments of the PASHPO and prepare revisions to the draft of the final report, as appropriate, and within 30 days, the BOARD shall submit the revised final draft to the PASHPO and NORFOLK SOUTHERN.

5. NORFOLK SOUTHERN shall donate all records and materials resulting from all archeological investigations to the State Museum of Pennsylvania, and these shall be curated no later than May 5, 2004, in accordance with 36 CFR 79 and the curation guidelines set forth in the *State Museum of Pennsylvania Curation Guidelines* (2002). The submission of records and materials shall include the appropriate curation fee and an executed Gift Agreement.

6. Should any unanticipated discoveries of archaeological sites be encountered during the implementation of this undertaking, the BOARD shall comply with 36 CFR § 800.6(c)(6) by consulting with the PASHPO and NORFOLK SOUTHERN and developing and implementing actions based on the comments of the Board, PASHPO and NORFOLK SOUTHERN relative to such sites.

7. It is unlikely that the archaeological site or sites identified during this project will contain human remains, associated or unassociated funerary projects, sacred objects, or items of cultural patrimony as those items are defined by the Native American Graves Protection and Repatriation Act (NAGPRA) (25 U.S.C. 3001). In the event that such items are identified, the BOARD shall immediately consult with the PASHPO and NORFOLK SOUTHERN and determine an appropriate plan of action.

ADMINISTRATIVE CONDITIONS

1. Personnel Qualifications

NORFOLK SOUTHERN shall ensure that all archeological work is carried out by or under the direct supervision of a person or persons meeting, at a minimum, the *Secretary of the Interior's Professional Qualifications Standards for Archaeological Investigations* (36 CFR 61).

2. Fieldwork Coordination

The BOARD shall initiate status meetings, telephonically or in person, at a minimum of every three weeks during the field component of the Phase III investigation with the PASHPO and NORFOLK SOUTHERN to discuss fieldwork, progress, schedule, and issues that may arise. The tasks required to implement the field component of the Phase III investigation at

each site shall be set out in the research plan and approved by the PASHPO, as referenced in stipulation 2 of this MOA, and shall consist of a checklist of fieldwork tasks to be completed for each site. NORFOLK SOUTHERN shall, during the status meetings, advise the PASHPO and the BOARD on progress and completion of the fieldwork tasks listed in the checklist for the relevant site. Once PASHPO and the BOARD have indicated their concurrence that the checklist for a specific site has been completed, the fieldwork component of the Phase III investigation for that site shall be concluded.

Upon conclusion of the fieldwork for all four sites (Olliver I site (36IN157), Olliver III site (36IN160), Olliver IV site (36IN428), and the Reed/Cribb site (36IN424), located within the NORFOLK SOUTHERN ROW), NORFOLK SOUTHERN may commence construction activities at the sites.

3. Resolution of Objections by Public

Should an objection pertaining to the implementation of the terms of this MOA be raised by a member of the public, the BOARD shall notify the PASHPO and NORFOLK SOUTHERN and take the objection into account, consulting with the objector and with the PASHPO and NORFOLK SOUTHERN to resolve the objection. Resolution of the objection may include meetings or telephone conferences, as appropriate.

4. Dispute Resolution of Objections by Signatories

Should the BOARD, NORFOLK SOUTHERN, or the PASHPO object within 30 days to any action(s) carried out or plans proposed pursuant to this MOA, the BOARD shall consult with the objecting party, within 30 days, to resolve the objection. The objection must be specifically identified and the reasons for objection documented. The BOARD will share this information with all signatories. If the BOARD determines that the objection cannot be resolved, the BOARD shall forward all documentation relevant to the dispute to the Council. Within 45 days of receipt of all pertinent documentation, the Council shall either:

A. Provide the BOARD with recommendations, which the BOARD will take into account in reaching a final decision regarding the dispute; or

B. Notify the BOARD that it will comment in accordance with 36 CFR 800.6(b), and proceed to comment. Any Council comment provided in response to such a request will be taken into account by the BOARD in accordance with 36 CFR 800.6(b) (2) with reference to the subject of the dispute.

5. Review of Implementation

If the stipulations have not been implemented within two years after execution of this MOA, the signatories shall review the MOA to determine whether revisions are needed.

If revisions are needed, the signatories to this MOA shall consult in accordance with 36 CFR § 800.6(c)(7) to make such revisions.

6. Termination

Any signatory may terminate the MOA by providing 30 days written notice to the other signatories. The signatories shall consult during the period prior to termination of participation to seek agreement on amendments or other actions that would avoid termination. In the event of termination, the BOARD shall in accordance with 36 CFR § 800.6(c) (8), request the comments of the Council under 36 CFR 800.7(a).

7. The BOARD and the Council may conclude the Section 106 process with an MOA between them if the PASHPO terminated consultation in accordance with 36 CFR § 800.7(a) (2).

8. Any suggested changes, corrections or additions to this MOA will be in writing in the form of a letter setting forth the proposed change, correction, or addition. Any proposed change, correction, or addition must be approved by each signatory. In addition, the letter must provide that the terms and conditions of the original MOA that are not modified remain in full force and effect. The approved change, correction or addition will become an amendment to this MOA.

Execution of this MOA by the BOARD, the PASHPO and the NORFOLK SOUTHERN, and the implementation of its terms, is evidence that the BOARD has taken into account the effects of NORFOLK SOUTHERN's construction and operation of the Saltsburg Connection to historic properties and has, therefore, satisfied its Section 106 responsibilities for this undertaking.

SURFACE TRANSPORTATION BOARD

By: Victoria Rutson Date: 3/12/03

THE PENNSYLVANIA STATE HISTORIC PRESERVATION OFFICER

By: Jean H. Cutler Date: 3/4/03

NORFOLK SOUTHERN CORPORATION AND NORFOLK SOUTHERN RAILWAY COMPANY

By: [signature] Date: 3/11/03

EXHIBIT 1

Archaeological Research Questions, Background Research, and Scope of Work for the Memorandum of Agreement Concerning the Saltsburg Connector and Archaeological Sites Olliver I (36IN175), Olliver III (36IN160), Olliver IV (36IN428), and the Reed/Cribb site (36IN424).

By Beverly A. Chiarulli and Bruce L. Manzano
IUP Archaeological Services

Prehistoric Archaeology Research Questions

The additional investigations of the prehistoric sites **Olliver I (36IN157), Olliver III (36IN160), and Olliver IV (36IN428)** on the proposed Saltsburg Connector have been designed to produce data that can be used to investigate several research themes, stated below, about the prehistoric settlement patterns in the Loyalhanna Watershed.

These sites are located at approximately 915 ft amsl on the T1 and T2 terraces along the east side of Blackleggs Creek, a 3rd order tributary of the Kiskiminetas River. These sites are within Watershed C (Loyalhanna Creek) of the Lower Allegheny, Ohio River Subbasin Number 18. Although each was given individual site numbers, they are mapped as nearly a continuous artifact concentration, separated by tree lined gullies, that extends for approximately 900 meters (2952 ft) along the east side of Blackleggs Creek. Within the immediate project vicinity, defined as beginning 1.2 km (0.74 mi) upstream from the mouth of Blackleggs Creek to about 305 m (1000 ft) past the town of Clarksburg on State Route 286 is a cluster of 13 prehistoric open-air sites with dates ranging from the Middle Archaic through the Late Woodland/Late Prehistoric cultural time periods.

This distribution represents a rather intense occupation along an approximately 3.0 km (1.9 mi) long section of Blackleggs Creek and suggests that a successful research focus will be geared towards collecting data that will allow us to further understand why these occupations occurred along this stretch of the creek as well as determine the types of occupation they represent.

Previous research reported for the nearby Conemaugh River-Blacklick Creek Watershed D also within the Lower Allegheny, Ohio Subbasin Number 18 by Beverly Chiarulli (2001) indicates:

1. This section of Blackleggs Creek contains a high number of recorded prehistoric sites similar to sections of the Conemaugh River-Blacklick Creek Watershed (Figure 1, Site Locations).
2. The study area is located near the juncture of major east west and north-south transportation routes, including both river corridors and Indian Paths (Figure 1, River Routes and Path Locations).

3. Specialized resource areas including saltlicks and probable bedded sources of Loyalhanna chert are located in close proximity to this project area (Figure 1, probable Loyalhanna Chert and Salt Bed Locations).

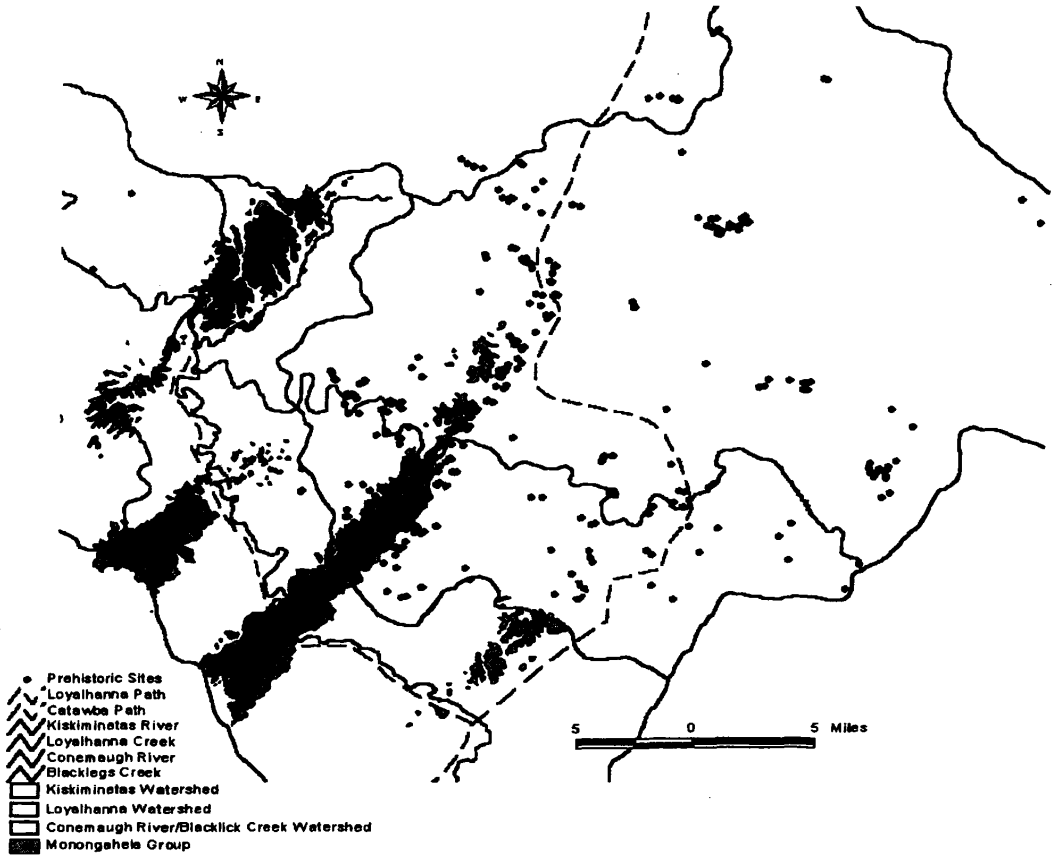

Figure 1. Location of sites within the Conemaugh River-Blacklick Creek Watershed, along Blackleggs Creek, major Indian paths close to the study area, and the geologic Monongahela Group north of the study area. Note that the salt bed locations occur along a northeast and southwest line just south of Blackleggs Creek.

This suggests that for the late Archaic through Late Woodland periods, sites in the study area (located in the vicinity of several major transportation routes and near several specialized resources) may:

1. Show greater variability in artifact types and cultural components than sites located in more isolated areas of the watershed located close to the headwaters and far from special stationary resources.

2. Contain less evidence like storage facilities, burials, structures, or large trash accumulations from permanent or long-term occupations and more evidence, like small artifact accumulations, and greater variability in artifact types associated with transitory, specialized, or intermittent occupations.

Thus, this study will analyze and critically evaluate the data from each of the Olliver sites to determine if such patterns occur. These results will then be compared to professionally generated data gleaned from a selection of similar site types within and near both Watersheds C and D, including a selection of comparable sites within these watersheds from more isolated areas as defined above.

Background Research

River Corridors, Indian Paths, and Transportation Routes

The Lower Allegheny (Ohio Subbasin 18) has a total drainage area of 2394 square miles and comprises the lowermost portion of the Allegheny River from Clinton to Pittsburgh, including the entire Kiskiminetas - Conemaugh River system (Figure 2). Subbasin 18 encompasses much of Allegheny, Indiana, Cambria, Somerset, and Westmoreland Counties, and portions of Butler and Armstrong Counties.

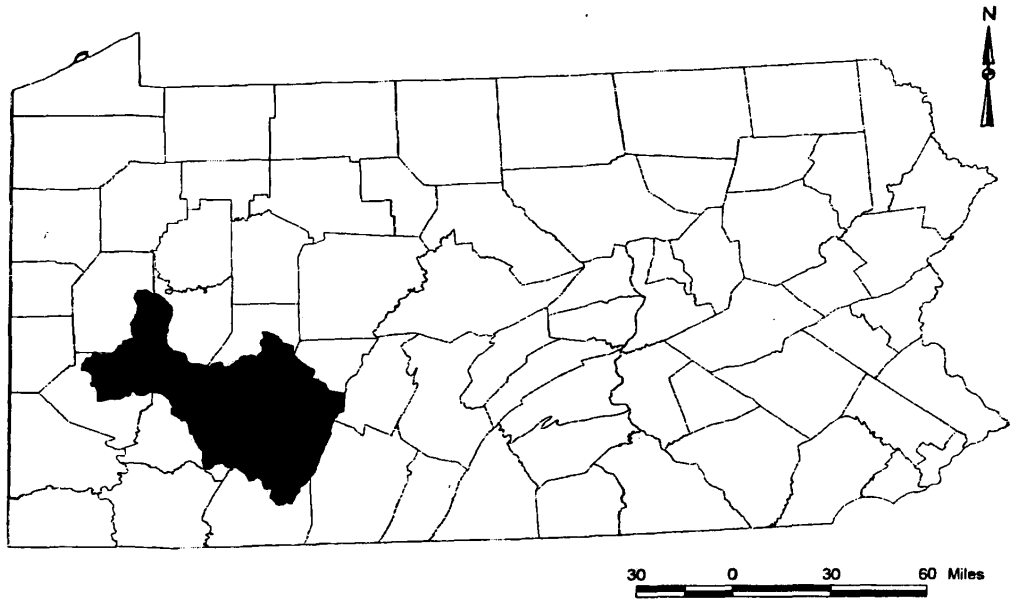

Figure 2. Location of the Lower Allegheny (Ohio Subbasin 18) within Pennsylvania.

Watershed C, the Loyalhanna Creek Watershed, has a total drainage area of 370 square miles. Its major waterways include Loyalhanna Creek, Blackleggs Creek and the lower

portion of the Conemaugh River. Watershed B also located within Subbasin 18 and termed the Kiskiminetas River Watershed has a total drainage area of 164 square miles. Its major waterways include the Kiskiminetas River and Beaver Run. Approximately 7 km (4.3 mi) south of the project area, Blackleggs Creek flows into the Kiskiementas, which is formed 1.6 km (1 mi) upstream by the juncture of Loyalhanna Creek and the Conemaugh River at Saltsburg.

The Conemaugh and the Kiskiementas Rivers provide an east west flowing system that provides a transportation route from the Allegheny River and the Ohio Basin on the west to the headwaters of the Conemaugh in Cambria County on the west side of the continental divide. The divide separates the westward flowing Ohio drainage from the eastward flowing Susquehanna drainage. Loyalhanna Creek provides access to this major east-west route from the south. Blackleggs Creek and Blacklick Creek especially provide access to the Conemaugh and Kiskiminetas rivers from the Crooked Creek Watershed, located to the north. In fact, the headwaters of Blackleggs Creek are less than 1,000 feet from the headwaters of Anthony Creek, one of the tributaries of Crooked Creek.

In addition, three major Indian paths recorded during the early historic period are located close to this area. The Catawba Path, one of the most important aboriginal paths in North America (Wallace 1971: 27), crossed the Conemaugh at the modern town of New Florence and then went north to the juncture of Blacklick and Twolicks Creeks and then followed Twolicks north to New York. The Kiskiminetas Path roughly parallels Crooked Creek and ran between modern Indiana and "Chartier's Landing" on the Allegheny near modern Tarentum. The Loyalhanna Path followed the west side of Loyalhanna Creek to its juncture with the Conemaugh and the start of the Kiskiminetas River. From there, the path crossed the Kiskiminetas near Saltsburg at the location of Keckenepaulin's Town and Blackleggs Town and followed the Kiskiminetas to Blackleggs Creek (Wallace 1971: 27, 145). The path continued on the east side of the Kiskiminetas traveling north of Blackleggs Creek to meet the Kiskiminetas Path at modern Vandergrift. It is stressed, however, that the landscape no doubt contained a complex system of unrecorded paths connected to the three mentioned above reflecting the adaptability native groups exhibited to the changing seasons, conditions of travel as well as the extensive amount of overland travel (Wallace 1971: 4).

Saltlicks and Chert Sources

Two specialized resources are located in the Loyalhanna watershed, saltlicks and chert. Saltlicks also called saltsprings originate from the Upper Silurian, Salina salt basin and occur on a southwest to northeast-orientated anticline intersecting the Conemaugh River near Saltsburg. The town was a center for commercial salt from 1815 to 1885 (Brinkman 1933). Springs produced salt licks that attracted big game to the area and were used for hunters to obtain deer, elk, and possibly bison. While most of the commercial salt came from wells drilled into the salt basin, the project area is located upstream from saltsprings reportedly near the mouth of Blackleggs Creek. The potential prehistoric and recorded historic production and use of salt from this region will be addressed in this research.

A major lithic source used in this region is Loyalhanna chert. This material is found at 1040 and 1100 ft amsl, as floatstone deposits in blocks 7.5 – 10 cm (3-4 in) thick by 150 cm (6 in) long within the geologic Monongahela Group of western Pennsylvania. The Monongahela Group is within 5 km (3 mi) of the study sites (Figure 1), substantial quarries of this material are found in Westmoreland County (Oshnock 2000) within 24 km (15 mi) of the project area. Given the Loyalhanna trail alignment with respect to the project area, the majority of the recovered material likely originated from quarries in Westmoreland County. The recovered lithics would address the sourcing of this material, as well as compare and contrast the reduction patterns of Loyalhanna chert at upland sites to that recovered from these terrace sites.

Cultural Affiliation

Throughout much of Pennsylvania, too few archaeological investigations have been conducted on sites to identify cultural affiliations prior to the Late Woodland/Late Prehistoric periods. For example, even though several Late Archaic traditions, like the Laurentien and Brewerton were identified by Ritchie (1961) for the state of New York, they are not seen as distinct traditions in most of western Pennsylvania. Instead, the associated projectile point types are thought to indicate chronological differences or evidence of contact with other areas. Likewise, researchers in the Susquehanna drainage and Eastern Pennsylvania no longer view projectile point types as evidence of individual cultural traditions (Custer 1992). Custer (1996) especially has demonstrated that different point types might have functional differences and a single group could have used a diversity of types. The investigations of the Olliver I, Olliver III, and Olliver IV sites on the Norfolk Southern right-of-way have the potential to recover samples of projectile point artifacts that can be used to measure the level of point type variability in this area.

By comparing the points from the Norfolk Southern sites, using both the systematic collections and the landowner's collection, to other IUP archaeological collections such as from sites along the Crooked Creek drainage, it may be possible to determine if a greater variety of point types occurs along Blackleggs Creek. Similarly, it may be possible to determine if such variability exists within point types between the northern and southern parts of Indiana County as suggested in the recent survey of the Conemaugh River-Blacklick Creek watershed (Chiarulli 2001). The identification of a Bare-Island-like point by URS in the Phase I/II Investigations of the Olliver III site (36In0160) lends support to the hypothesis that this area does show contact with or influence from central Pennsylvania via over land routes or by watercourse mainly the West Branch Susquehanna River to the Conemaugh River then to the Blackleggs Creek. Future investigations, although not to be conducted during this study, may clarify such relationships and allow researchers to determine the extent of contact between local groups with those from central Pennsylvania.

The Late Woodland/Late Prehistoric cultures in Pennsylvania can be classified as complexes and phases based on the types of ceramics recovered from the sites. Ceramics at temporary, extractive, or intermittent sites reflect in large part specific type of activities that occurred at the sites and not necessarily on the length of time sites were occupied.

Ceramic use accompanied much the same type of tasks that commonly employed ceramics at long termed occupied sites, such as cooking, storage or holding containers, and processing. Sites along Crooked Creek and Redbank Creek with limestone-tempered ceramics are classified as Late Woodland sites, even though they date to the same time period as some Late Prehistoric Monongahela sites. The Mary Rinn site (36In0029) north of Indiana, PA and the Kimmel Mine sites (Gerald Kimmel #1 [36Ar0121], Gerald Kimmel #5 [36Ar0221]) near Shelocta are the largest Late Prehistoric/Late Woodland sites that have been investigated in the Crooked Creek drainage. This drainage forms part of the Cowanshannock-Crooked Creeks Watershed E within the Central Allegheny, Ohio Subbasin 17 situated above the Lower Allegheny, Ohio Subbasin 18. The Kimmel Mine sites, investigated by the Bureau of Historic Preservation in the 1980s, are located just north of this project area along Crooked Creek near Shelocta. The Crooked Creek ceramics are similar to the limestone-tempered types recovered from the Fishbasket sites (Fishbasket [36Ar0134], Fishbasket North [36Cl0193]) north of Crooked Creek on Redbank Creek. A detailed comparison of these ceramics, however, has not been made and the relationship between the Crooked Creek sites and the Fishbasket sites remains unclear. The recovery of limestone-tempered, Fishbasket series ceramics from the three Olliver sites under investigation shows an apparent connection between Late Woodland/Late Prehistoric occupations on Blackleggs Creek and to those on Crooked Creek.

Just upstream from Saltsburg on the Conemaugh River, Late Prehistoric sites, such as the Johnston Site (36In0002) have been identified as part of the Monongahela Culture, Johnston Phase in large part on the presence of shell-tempered pottery (Dragoo 1955, George 1978). Recent investigations by the IUP Field School during the summer of 2002 at the Brandt Site (36In0362) located at the juncture of Blacklick and Twolick Creek in the Conemaugh River-Blacklick Creek Watershed has also recovered shell tempered Monongahela Type ceramics (S. Neusius, per comm.). One of the important research questions of this area has to do with the distributions of limestone and shell tempered ceramics and the relationship between the Fishbasket cultural complex and the Monongahela cultures. Fishbasket ceramics from the Olliver sites located within the Lower Allegheny watershed, where sites predominately contain Monongahela type ceramics, offers preliminary evidence for greater cultural variability in the study area.

Olliver I Site (36In0157)

The Olliver I Site (36In0157) has been interpreted as a low-density prehistoric site dated primarily to the Late Archaic and Late Woodland periods. Most of the artifacts were found on two slight rises on a large terrace. Locus 1 covers 1,350 square meters (0.33 acres) and produced 19 artifacts from the five of the nine shovel tests excavated on the rise including three projectile points, all dated to the Late Archaic period (two Otter Creek points, one Brewerton side-notched). Locus 2 covers 450 square meters (0.11 acres) and produced 11 artifacts from six of the seven excavated shovel tests. The only diagnostic was a small piece of limestone-tempered pottery (Fishbasket Plain), diagnostic of a Late Woodland occupation. In addition, three flakes were recovered from a shovel test located in a swale between the two rises. While the property owners, the recovery of

this number of artifacts, and especially diagnostics, have heavily collected the site from so few shovel tests suggests that Loci 1 and 2 represent small spatially and temporally distinct occupations. The recovery of fire-cracked rock at this site suggests that features may be present although plowing may have disturbed them. Investigations at the site will focus on the recovery of additional artifact samples and the identification of features that extend below the plow zone. Sites and clusters of sites from around the project area producing features and ceramics will be examined for this study.

Olliver Site III (36In160)

Olliver III was originally found during the investigation of a 300-meter section of the right-of-way located on a T-2 terrace overlooking Blackleggs Creek. The Phase I/II investigations found that the artifacts were concentrated in an area measuring 105 x 30 meters (3,150 square meters, 0.78 acres). A total of 95 prehistoric artifacts were recovered during the investigations, although only 64 were recovered from within the right-of-way. Recovered diagnostics included two Late Woodland sherds (a Fishbasket Plain, limestone tempered and a Levanna Cord on Cord, quartz tempered) and a Late Archaic Bare Island-like point. The investigations included a systematic surface collection; along with the excavation of 57 shovel tests and three test units. Ten shovel tests contained cultural material. In addition, 15 artifacts were recovered from Test Unit 1, 14 artifacts were recovered from Test Unit 2, and eight were recovered from Test Unit 3. The investigations found that the prehistoric material occurs within the plowzone and that there is no indication of buried deposits. Given the presence of Late Woodland diagnostics, however, there is a strong possibility that subsurface features such as storage pits, post molds, and fire pits, are present at the site.

Olliver IV Site (36In428)

The Olliver IV Site is located on a 60 meter-long section of the proposed ROW on a T-2 terrace. During the Phase I/II survey surface visibility was excellent, so the site was investigated through a controlled surface collection in addition to the excavation of shovel tests. Three one-meter square test units were excavated as well. A total of 176 artifacts were recovered from the excavations in the ROW. An additional 35 artifacts were recovered from outside the ROW. Diagnostics recovered from the site include one Late Woodland, Fishbasket Plain, limestone tempered sherd, four Late Archaic Otter Creek Projectile Points, one Steubenville Point (Late Archaic/Early Woodland), and one Brewerton Eared Projectile Point. No evidence of buried deposits was found in the excavation units.

The Phase I/II investigators concluded that the artifacts found in this area were displaced from plowing. Given the presence of Late Woodland diagnostics, however, there is a strong possibility that subsurface features could be found at these sites. A similar field methodology is proposed below for each of the Olliver sites with explicit modifications occurring depending on the degree and size of artifact concentrations or loci identified at the sites.

Prehistoric Field Methodology

The BHP Commonwealth Archaeology Program studied similar terrace sites throughout the commonwealth using a combination of surface collections and mechanical removal of the plowzone as a cost efficient method for investigations. Fieldwork will sample 25% of the site portions (see Table 1) within the project area of potential effect (APE).

The field methodology will follow the BHP 1991 (reprinted 2001) guidelines comprising, when encountered, the recovery of carbon samples, mapping features, generating plan views of sub-plowzone floors, profiles, and documentary photographs and noting the policy to follow if human remains or burials are encountered. Specifically, field work and analysis includes the following tasks:

1. Plow and disc the part of each site contained within the APE.

2. Establish a datum for each site outside the plowed area to set up a grid system of 5-meter blocks within the site portion under investigation.

3. After sufficient rain, conduct a controlled surface collection of each site APE flagging all artifacts within the blocks. Then, using a Nikon Total Station, recover the flagged artifacts after recording their locations and their general identification (i.e. flake, projectile point, ceramic, fire-cracked rock) tied to a system of sequential numbers.

4. Excavate a series of shovel tests pits (STP) at 5-meter intervals within designated loci or site area as recognized by the Phase I/II investigations and the recent surface collections (see Table 1).

TABLE 1. Amount of Excavations Required for 25% Sample from Sites on the Saltsburg Connector Right-of-Way.

Site	Site Area to be Investigated	No. of STPs	Total Area Investigated by STPs (m^2)	Proposed No. of $1m^2$ Units	Proposed Area (m^2) of Site Area Stripped	Total % of Site Area Excavated and/or Stripped
Olliver I	2288	110	27.5	-	544	25%
Olliver III	3375	163	40.75	-	803	25%
Olliver IV	890	43	10.75	-	212	25%
Reed/Cribb	488	24	6	116	-	25%
Total (m^2)				**116**	**1559**	**1675**

5. Mechanically strip specific amounts (see Table 1) of the plowzone using a smooth bucket within 5 m^2 blocks, placed systematically within each site area investigated. Stripped areas will be shoveled scraped and hand troweled for features; features will be mapped and photographed within the B-horizon

interface and profile. Placement of mechanical stripping will sample high artifact loci and swales plus areas of low artifact densities documented from the Phase I/II investigations and the recent surface collections. This approach will attempt to adequately sample the site portion especially the discovery of features and the estimation of their frequencies within the APE (Shot 1987). Approximately thirty percent of the 5m² blocks will be used to expand feature excavations as necessary.

6. All cultural features or at least a representative, defined sample will be hand excavated. When appropriate, the feature matrix will be bagged and sent through flotation to recover small botanical and microfaunal remains. Samples will be collected for radiocarbon analysis where present from excavated features to comprise up to a maximum of five dates being returned and reported for each site.

7. Analysis of the prehistoric artifacts will involve recording the diagnostic lithic artifacts by type name (when possible) and by raw material. Morphological tool categories will be defined and analyzed, with counts and percentages calculated for all lithic tool categories. Prehistoric ceramics will be analyzed and recorded by type, surface treatment, and temper. Estimates of the minimum number of vessels will be provided. Identifiable macrobotanical and macrofaunal remains will be recorded to their lowest possible taxonomic level. A 10 to 25% sample of recovered lithic tools will be further defined by an examination of edge-wear pattern analyses through low power microscopy.

8. The location of any recovered archaeological materials will be recorded on project maps and checked through the use of a GPS (global positioning satellite) hand unit.

9. Soil samples will be collected for magnetic susceptibility analysis. Such analyses have shown a significant correlation with the occurrence human occupation (Dalan 2001). This inexpensive test is viewed as a useful adjunct to the location of sites and site boundaries particularly within this type of archaeological setting.

Research Questions for the Reed/Cribb site

The research focus for the Reed/Cribb site will address the extent to which the recovered artifacts reflect the site occupant's participation in local and regional popular consumer culture. To date, the Loyalhanna Creek Watershed C contains 41 historic archaeological sites. More than 80% of these are industrial, trade, agricultural, or transportation sites. Few (an estimated 10%) are residential and none within this watershed were subjected to Phase III investigations. The Phase I/II survey indicated that the site represents the location of a small temporary tenancy within an area approximately 66 x 66 feet (20 x 20 meters). The analyses of the archaeological data and their pattern of economic status will offer insight into local and regional popular consumer.

As yet, the examination of landowner records failed to reveal the background of who owned the property during the period this site was occupied. The site is viewed as

occurring within an isolated, rural context. The recovered remains may offer an interesting avenue to test the theory of economic isolation posed by Miller and Hurry (1983) which notes the similarity of material possessions owned by a substantial landowner isolated from the market to those recovered from tenants or squatters not owning land. It is suspected that individual(s) not owning the land occupied the site. The major research goal of this historic archaeological study is to compare the artifact assemblage from this site to those obtained from a relevant selection of tenant, squatters, and landowner sites, dating to the same historic period. Such a comparison will aid to determine the socioeconomic status, consumer behavior, and ethnicity of the individual(s) who once occupied the Reed/Cribb Site.

Reed/Cribb Site (36In0424)

The Reed/Cribb Site (36In0424) is a historic site dated to the mid 19th century and covered by late nineteenth to early twentieth century fill from the construction of the Baltimore and Ohio Railroad. Over 1200 artifacts were recovered from three excavation units and 15 shovel tests in an area measuring 300 feet (100 meters) by 150 feet (45 meters). According to the Phase I/II report, Test Unit A encountered the remains of a small tenancy or residence. The possible structure occurs within an area approximately 66 feet (20 meters) square and is sealed on average by 11 inches (28 cm) of late 19th century fill and recent silt loam. The site appears to contain two buried A-horizons interpreted as occupation surfaces. The structure is thought to date between 1842 and 1871. The site does not appear to have been disturbed by plowing and the recent fill has protected it from major disturbance.

Previous excavations in small tenancies in parts of the Mid-Atlantic region that seem similar to the Reed/Cribb Site (36In0424) suggest that these structures contain a relatively limited number of internal features and artifact concentrations. For example excavations at the Thomas Williams Site in Delaware, found that a small historic structure measuring 17 x 27, contained a small cellar, and a stone half foundation (Catts and Custer 1990: 216). Beneath the other half of the structure the foundation rested ground-laid sills or on wooden blocks. A 25% excavation sample recovered more than 8,266 artifacts, primarily ceramics, window glass, brick, and nails.

The field investigations at the Reed/Cribb site are designed to obtain a representative artifact sample from the undisturbed buried A-horizons and recognizable subsurface features from the excavation of up to 25% of the site area. The goal will be to identify the type of structure, manner of construction and possibly internal activity areas. If confirmed, the size and manner of construction, plus any associated activity features. A comparison of the data recovered from this site to those from similarly dated sites in the watershed or surrounding watersheds will offer an opportunity to increase our knowledge of small isolated-rural historic sites during the mid-nineteenth century within this region of Pennsylvania.

Field Methodology

To effectively excavate the area of the Reed/Cribb Site, we propose to stage the investigations to recover information on internal features and activity areas while avoiding the collection of redundant data.

1. First, we propose to verify that the site is buried under an 11-inch (28 cm) thick layer of fill and recent silt through the excavation of six one-foot square test units. Once we confirm the thickness of the fill layer, we propose to have it mechanically removed to minimize the amount of sediment that will be hand excavated.

2. We then propose to conduct a geophysical survey of the area using both proton magnetometer and soil magnetic susceptibility analysis over the area to identify the layout of the potential structure and location of subsurface features. This approach will enable a more efficient placement of excavation units to determine the site characteristics as well as help measure the reliability of both geophysical tests.

3. The next stage of investigations will consist of the excavation of approximately 163 one-foot square test units placed on a five-foot grid across the site. We will track the number and categories of artifacts recovered from each of the units and produce a series of density maps showing the distribution of artifacts using a mapping program such as surfer. This information in combination with the geophysical survey will provide us with a detailed preliminary view of artifact concentrations and possible feature locations. At the end of this initial test phase, we propose to discuss with representatives of Norfolk Southern and the Bureau for Historic Preservation (PASHPO), either telephonically or in person, the results of the initial test phase and the location of additional excavations.

4. The next stage of investigation will consist of excavating a series of six-foot square units in areas of high artifact density or possible feature locations to better define these areas and to recover larger samples of artifacts. During this phase we will initiate a daily monitoring of the excavated artifacts in order to measure artifact redundancy. Thirteen block units will be excavated. These blocks plus the initial test unit stage will investigate a minimum of 653 square feet or 15 percent of the site area.

5. At the conclusion of this phase, we will again evaluate the results of the investigation to date and will discuss with representatives of Norfolk Southern and PASHPO, telephonically or in person, those results and the need for and extent of, if any, additional investigation to meet the following specific excavations goals for this site: 1) identify the structure location, if present, and 2) recover a representative sample of artifacts specifically attributed to the time when the structure was occupied. This staged approach will allow us to make

timely decisions on the location and number of excavation units. If sufficient information has not been recovered to meet these goals, we will continue the excavation to recover a sample of up to 25% of the site area.

6. All vertical excavation units will measure 6" (15 cm) thick within natural strata. Units will be screened through 1/4" (0.64 cm) hardware cloth.

7. Any cultural features encountered will be excavated separately. When appropriate the feature matrix will be bagged and sent through flotation to recover botanical and micro faunal remains.

8. Artifacts recovered from historic contexts will be identified according to temporal affiliation. Ceramic counts and percentages will be recorded by ware type and decoration. Any ceramic maker's marks will be identified and recorded. A minimum number of vessels will be calculated for each ware type. Metal artifacts, such as nails, will be counted by type and assigned according to specific manufacturing technique. Glass sherds will be categorized by color and type.

Report Preparation

Within three weeks of the completion of the field investigations, a management summary report will be prepared. This will describe the results of the fieldwork and provide preliminary artifact and sample catalogues. The draft final report will be submitted to the client by October 31, 2003 followed by the final report 30 days after receiving the reviewer's comments.

References Cited

Brinkman, C.

1933 Saltsburg Borough Once Was Bustling Center of a Now Forgotten Industry. *Pittsburgh Press*, June 4.

Catts, W. P. and J. F. Custer

1990 Tenant Farmers, Stone Masons, and Black Laborers: Final Archaeological Investigations of the Thomas Williams Site, Glasgow, New Castle County, Delaware. *Delaware Department of Transportation Archaeological Series* No. 82.

Chiarulli, B. A.

2001 Prehistoric Settlement Patterns in Upland Settings: An Analysis of Site Data in Watershed D (Conemaugh River Blacklick Creek). In: *Prehistoric Settlement Patterns in Upland Settings: An Analysis of Site Data in a Sample of Exempted Watershed.* Prepared for the Pennsylvania Historical and Museum Commission Bureau for Historic Preservation Grants Program, pp. 5-186.

Custer, J. F.

1992 Analysis of Late Archaic Quartzite Industries fro the Long Site and Other Sites of the Middle Atlantic Piedmont. *Pennsylvania Archaeologist* Vol. 62(1): 12-47.

1996 *Prehistoric Cultures in Eastern Pennsylvania.* Anthropological Series No. 7, Pennsylvania Historical and Museum Commission, Harrisburg.

Dalan, R. A. and S. K. Banerjee

1998 Solving Archaeological Problems Using Techniques of Soil Magnetism. *Geoarchaeology*, 13, 3-36.

Dragoo, D. W.

1955 Excavations at the Johnston Site, Indiana County, Pennsylvania. *Pennsylvania Archaeologist Memoir Issue.* Vol. 25(2): 85-141.

George, R. L.

1978 The McJunkin Site, a Preliminary Report. *Pennsylvania Archaeologist* Vol. 48(4): 33-47.

Miller, G. L. and S. D. Henry

1983 Ceramic supply in the Economically Isolated Frontier Community: Portage County of the Ohio Western Reserve, 1800-1825. In *Historical Archaeology* Vol. 17(2): 80-92.

Oshnock, R.

2000 Prehistoric use of Loyalhanna Chert. Paper presented at the 71st Annual Meeting for the Society for Pennsylvania Archaeology, Williamsport.

Ritchie, W. A.

1961 A Typology and Nomenclature for New York Projectile Points. *New York State Museum Bulletin Number 384.* Albany New York.

Shot, M. J.

1987 Feature Discovery and the Sampling Requirements of Archaeological Evaluations. *Journal of Field Archaeology.* Vol. 14: 359-371.

Wallace, P. A.

1971 *Indians Paths of Pennsylvania.* The Pennsylvania Historical and Museum Commission, Harrisburg.